

**STATEMENT OF DANA TULIS
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U. S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
SUBCOMMITTEE ON NATIONAL SECURITY, EMERGING THREATS, AND
INTERNATIONAL RELATIONS
COMMITTEE ON GOVERNMENT REFORM
U. S. HOUSE OF REPRESENTATIVES**

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Mr. Chairman and members of the Committee, I am Dana Tulis, Deputy Director of the Office of Emergency Management, within the Office of Solid Waste and Emergency Response at the Environmental Protection Agency (EPA). My Office is responsible for providing national leadership to prevent, prepare for, and respond to human health and environmental emergencies, including terrorist events. We were actively involved in the response to the events of 9/11 and the subsequent anthrax attacks, and we are working very closely with the Department of Homeland Security (DHS) and other federal agencies to enhance the Nation's capabilities to respond to future events.

In addition to playing a substantial role in developing the new National Response Plan, we are also now staffing up a new, dedicated National Decontamination Team, which will provide technical expertise for environmental sampling and decontamination of biological, chemical or radiological weapons of mass destruction. I appreciate the opportunity to discuss EPA's involvement in the multi-agency efforts to detect anthrax in postal facilities during 2001 and the findings of the Government Accountability Office (GAO) in their recent report on Anthrax Detection. I would also like to share with you the steps we've taken since that time to improve the Nation's ability to detect and respond to anthrax contamination.

INTRODUCTION

In responding to the anthrax attacks of 2001, EPA's role at a site generally began after the Centers for Disease Control and Prevention (CDC) determined the presence of a biological contaminant that poses an unacceptable risk to human health. In Florida, EPA collected targeted environmental samples at the U. S. Postal Service (USPS) West Palm Beach Processing and Distribution Center (P&DC), through which the letter or package sent to American Media Incorporated is believed to have passed. These samples were used to characterize the extent of contamination for the purposes of conducting necessary decontamination. We also conducted targeted environmental characterization sampling at five other postal offices downstream of the West Palm Beach facility, also for the purposes of decontamination. EPA did not collect samples at other USPS facilities. We provided technical expertise and advice on the cleanup of a number of contaminated USPS facilities, most notably the Brentwood and Trenton P&DC fumigations, and in some cases, participated in evaluating the effectiveness of decontamination.

On Capitol Hill, we conducted extensive characterization sampling in several buildings to determine how far the contamination had spread and how best to decontaminate the buildings. We also conducted the actual decontamination, and then performed extensive environmental clearance sampling afterwards to make sure that the decontamination was effective.

EPA also convened and chaired the National Coordination Council (NCC), an *ad hoc* subcommittee of the National Response Team (NRT), to facilitate consistency in response across all facilities contaminated with anthrax, and to provide a forum for resolving interagency issues. In addition to EPA and the USPS, other NCC participants included CDC, the Agency for Toxic Substances and Disease Registry (ATSDR), the National Institute of Occupational Safety and

Health (NIOSH), the Occupational Safety and Health Administration (OSHA), and the U.S. Coast Guard. To document the experience gained during the 2001 anthrax cleanups, the NCC also produced the NRT's Technical Assistance Document for Anthrax Response. In developing that document, the NCC decided to include only those methods, techniques, and technologies that had been used effectively in experience to date, and were appropriate options for use in future events. Similar to GAO, the NCC determined that experience had shown that dry swabs were not effective in sampling for anthrax, and as such, their use is not discussed in the document.

SAMPLING STRATEGIES

The GAO Report appears to recommend probability sampling over targeted sampling for detecting anthrax contamination in a building. EPA believes that targeted sampling strategies are valid and necessary for rapidly assessing the likelihood of contamination to ensure that necessary actions can be taken quickly to protect those potentially exposed. Especially where the source of contamination is known, targeted sampling of surfaces most likely to be contaminated, as determined from incident-specific details such as traffic patterns and airflow within the facility, epidemiological data, and forensic information provided by the Federal Bureau of Investigation (FBI), should provide key information to determine whether contamination exists in the facility and whether further characterization sampling and decontamination are necessary. Where contamination is known to exist, but the source is unknown, use of statistically-based sampling may improve the probability of detecting contamination.

Statistically-based sampling strategies, in combination with targeted strategies, are also

appropriate for determining the effectiveness of decontamination. Sampling experts from EPA, CDC, OSHA, and the Department of Army worked together to develop sampling strategies to confirm decontamination effectiveness after the fumigations of most of the facilities for anthrax contamination. Focused sampling was performed in those areas where contamination was discovered prior to decontamination efforts. Biased sampling took place in areas of increased suspicion of previous contamination and those areas expected to be frequented by building personnel in the future. Grid or random sampling was done in the remaining areas of the facility.

A totally random sampling plan might not have specified sampling of areas of known previous contamination and thus would not have provided confirmation that these areas were successfully remediated.

During the 2001 anthrax attacks, there were hundreds of postal facilities potentially contaminated, as well as literally thousands of other “white powder” incidents reported over a short period of time, it was impractical to conduct an exhaustive sampling effort at every potential site. It would also have taken far longer to grid out each location, and then collect and analyze the larger number of samples generally needed for probabilistic sampling. Quick action was needed to identify the most likely areas of contamination and take immediate steps to protect the greatest number of people most likely to be exposed.

ENHANCING NATIONAL LABORATORY CAPABILITY

EPA agrees with GAO that there is a critical need for validated sampling and analytical methods, and we are taking a number of steps to address this important gap. Although a lot remains to be done, sampling methodologies have improved and are now more consistently applied. EPA coordinates research in support of the Agency's homeland security mission and

collaborates across the federal government in a variety of science and technology areas. As part of this effort, EPA has been working to develop standardized methods and procedures to support emergency responders and decontamination personnel. Anthrax is one of the contaminants of concern that is being addressed.

These standardized methods and procedures include protocols to sample various types of surfaces and liquids to determine if anthrax is present. Techniques are also being developed to concentrate samples of chemical and biological contaminants, where necessary, to facilitate detection at low levels. Analytical methods being evaluated include (but are not limited to) adaptations of Polymerase Chain Reaction (PCR) methods for determining viability and laser-induced breakdown spectroscopy (LIBS) methods for real-time detection and identification of anthrax spores. Traditional culture methods are also being improved.

EPA is actively engaged in testing and evaluating the performance of emerging and commercially available homeland security-related technologies. To date, four immunoassay test kits have been tested and evaluated for their ability to detect and measure anthrax in water. Additional technologies are being evaluated for detection of anthrax and other threat agents in air, in water, and on surfaces.

EPA has established an intra-Agency work group to address the development of clean-up levels for contaminants (including anthrax as a priority). This work group will provide input to the larger Interagency Committee that has been established by the Office of Science and Technology Policy's Subcommittee on Decontamination Standards and Technology (OSTP/SDST). EPA is developing preliminary risk assessment methods and approaches, and collecting data to support these methods and approaches, for use in homeland security applications.

ENHANCING NATIONAL LABORATORY CAPACITY

The GAO Report notes that extensive environmental sampling efforts can strain available laboratory capacity, and it suggests that laboratory capacity can be increased. Unfortunately, it is not that easy to increase lab capacity especially for analyses associated with biological and chemical warfare agents where capacity is very limited or may not exist. However, when possible, individual labs are accessed for surge capacity during time-critical incidents, but there is no environmental laboratory network analogous to the Laboratory Response Network (LRN) at this time. EPA and other Agencies have initiated a number of steps to deal with this important problem.

EPA's Homeland Security Laboratory Response Work Group, with representation from each media program and five of ten EPA regions, was created in October 2002 to identify and address homeland security laboratory issues. Work Group members have directly engaged in discussions with representatives from the White House Homeland Security Council, DHS, the Departments of Agriculture and Defense, FBI, CDC, and the Food and Drug Administration. State laboratory directors and private associations such as the Association of Public Health Laboratories have also been engaged.

During the past two years, the Work Group has developed a number of tangible products as part of a national solution to analyzing large numbers of environmental samples. We have developed an on-line Environmental Lab Compendium of State, EPA, and some commercial environmental analysis capability. We are also working to incorporate the capabilities of other Federal agencies. Based on the Compendium, we

have analyzed and mapped current laboratory capacities to determine the national supply of laboratory analyses for chemical, biological, and radiological warfare agents. We are also in the process of analyzing five of the White House Homeland Security Council's Scenarios to determine the national need and the gap between supply and demand.

The Workgroup has identified 79 lab analysts from across EPA for inclusion in a trained reserve corps for laboratory support and response. The reserve corps will be trained on chemical and biological analyses. Each of the Regions has established regional/state networks for laboratory analyses and we have recently signed an Memorandum of Agreement with FBI to provide forensic analyses.

We have also begun planning for development of a mobile triage prototype for screening unknown samples before they enter a fixed laboratory. This is essential for protecting the health and safety of laboratory employees. With support and funding from DHS, the first two prototype units will be established at the EPA Region 1 Lab and the New York State Dept. of Health Lab in FY 05.

CDC and EPA developed a Memorandum of Understanding (MOU) to leverage the work of the Laboratory Response Network (LRN) and to define roles and responsibilities between EPA and CDC for environmental analyses. EPA and CDC worked closely with the White House Homeland Security Council to expand the MOU to include all other federal agencies with existing or developing networks. The MOU, known as the Integrated Consortium of Laboratory Networks, is currently under final review by all participating agencies, and the official signing ceremony is expected to take place very soon. The Consortium will establish workgroups to address consistency in the use of sampling and analytical

methods across the participating agencies in the network. DHS has already hosted two meetings to further these interagency efforts.

CONCLUSION

We appreciate GAO's efforts to look ahead toward improving the Nation's ability to respond more effectively in the future. EPA recognizes the need to validate sampling and analytical methods, to develop new and better tools for doing this important work, and to increase national capacity for analyzing environmental samples. We believe we have taken significant steps in these areas and have greatly benefitted by working closely with our colleagues on this panel. We look forward to continued collaboration in the future.